

**ABSTRACT**

A multi protocol transponder for a communications network having a antenna for receiving a first RF signal transmitted according to a communications protocol and a detector for identifying the communications protocol from the first RF signal. A protocol controller is provided for executing the identified communications protocol to generate a second RF signal. Thereafter an antenna transmits the second RF signal according to the communications protocol either by active transmission or modulated backscatter. The transponder may implement a variety of wide area and localized lane based protocols for Automatic Vehicle Identification systems such as CVO and Toll systems.